REMARKS

Applicants' representative appreciates the courtesies extended during the in-person interview of March 23, 2009. The amendments and remarks made herein are in accordance with those discussed during the in-person interview.

The Office Action mailed January 7, 2009, considered and rejected claims 1-31. Claims 1 and 10 were rejected under 35 U.S.C. 102(e) as being anticipated by Thienot et al. (U.S. Publ. No. 2004/0013307) hereinafter *Thienot*. Claims 2-8 and 11-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Thienot* in view of Brook (U.S. Publ. No. 2002/0038320) hereinafter *Brook*. Claim 9 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Thienot* in view of *Brook* and further in view of Lim et al. (U.S. Publ. No. 2004/0064826) hereinafter *Lim*.

By this amended amendment claims 1, 2, 4, 5, 7-13, 15, 17, 20-24, 29, and 30 are amended.[1]   Claims 3, 14, 16, 25-28, and 31 are cancelled. Accordingly, claims 1, 2, 4-13, 15, 17-24, 29, and 30 are pending, of which claims 1, 10, 13, and 24 are the independent claims at issue.

The invention is generally directed to determining XML schema type equivalence. For example, claim 1 recites a method for determining equivalence of XML schema types. Claim includes identifying a first XML schema type and a second XML schema type. The first XML schema type provides a representation of first schema components. The second XML schema type provides a representation of second schema components. However, the representation of the second schema components differs from the representation of the first schema components such that presentation of the first schema components and the second schema components is insufficient to determine if the first and second XML schema types are equivalent XML schema types.

Each of the first and second XML schema types are normalized so as to generate a normalized first XML schema type and a normalized second XML schema type. Normalization includes rewriting the first and second XML schema types into a unified format. Rewriting an XML schema type into the unified format includes identifying any schema components from the

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[1] Support for the amendments to the claims are found throughout the originally filed specification and previously presented claims, including but not limited to paragraphs [030], [031], and [037]-[048] and Figures 2 and 3.

XML schema type that can be presented in different formats or omitted from the XML schema type without affecting the definition of the XML schema type.

It is determined that the first and second normalized XML schema types are equivalent. Determining equivalency includes comparing the schema components of the first normalized XML schema type to the schema components of the second normalized XML schema type. A single class collectively representing both the first XML schema type and the second XML schema type is created. Creation of the single class is based on the determination of equivalence and not withstanding that the representation of second schema components differs from the representation of the first schema components. The single class is compatible with applications utilizing either the first XML schema type or the second XML schema type.

Claim 10 is a computer program product corresponding to the method of claim 1.

Claim 13 is a method claims similar to claim 1 furthering defining that a unified formation is a customized format and that determining equivalence includes comparing hash values.

Claim 24 is a computer program product corresponding to claim 13.

Applicants respectfully submit that the cited art of record does not anticipate or otherwise render the amended claims unpatentable for at least the reason that the cited art does not disclose, suggest, or enable each and every element of these claims.

Thienot describes compressing and decompressing structure documents. A structure schema is compressed using compression algorithms and decompressed using corresponding decompression algorithms. Upon decompression, a decompressed structure document is at least equivalent if not identical to the original structure document. (para. [0018] and Figure 1). *Thienot* states that the decompressed structure document is equivalent to an original (and the same) structure document. However, there is no described mechanism for determining equivalence. As such, *Thienot* is also silent with respect to comparing different schema components from different schema types for equivalence. Further, *Thienot* is silent with respect to rewriting a plurality of different schema types in preparation for a subsequent comparison of the schema types.

Brooks describes a hash compact XML parser. *Brooks* is primary cited for generation and comparison of hash values and identifying schema types having the same qname. (paras.

[[0006] and [0013]]). However, *Brooks* fails to compensate for the identified deficiencies of *Thienot*.

Accordingly, the cited art fails to teach or suggest either singly or in combination:

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a step for the processor normalizing the first XML schema type into a normalized first XML schema type in a unified schema format, normalization of the first XML schema type including:

identifying one or more schema components in the first schema components that can be equivalently presented in the unified schema format, the unified schema format differing for the format of both the first and second XML schema types, identifying one or more components in the first schema components including:

identifying any discretionary components in the first schema components that are expressly recited;

identifying any discretionary components in the first schema components that are expressly omitted; and

identifying one or more list of components in the first schema components that are written in a particular order; and

rewriting the first XML schema type into the unified schema format, including a) at least one of deleting a discretionary component from the first XML schema type that was that as expressly recited in the first XML schema type and writing a discretionary component to the first XML schema type that was expressly omitted in the first XML schema type and b) rewriting the order of at least one list of components in the first XML schema type into a different predetermined order of the unified format;

a step for the processor normalizing the second XML schema type into a normalized second XML schema type in the unified schema format, normalization of the second XML schema type including:

identifying one or more schema components in the second schema components that can be equivalently presented in the unified schema format,

identifying one or more components in the first schema components including:

identifying any discretionary components in the second schema components that are expressly recited;

identifying any discretionary components in the second schema components that are expressly omitted; and

identifying one or more list of components in the second schema components that are written in a particular order; and

rewriting the second XML schema type into the unified schema format, including a) at least one of deleting a discretionary component from the second XML schema type that as expressly recited in the second XML schema type and writing a discretionary component to the second XML schema type that was expressly omitted in the second XML schema type and b) rewriting the order of at least one list of components in the second XML schema type into a different predetermined order of the unified format;

a step for determining that the first and second normalized XML schema types are equivalent, including comparing the schema components of the first normalized XML schema type to the schema components of the second normalized XML schema type; and

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as recited in claim 1, when viewed in combination with the other limitations of claim 1. For at least this reason claim 1 patentably defines over the art of record. For at least the same reason, claim 10 patentably defines over the art of record. Claims 13 and 24 patentably define over the art of record at least for reasons similar to claims 1 and 10. Dependent claims patentably define over the art of record at least for reasons as their corresponding base claim.

Lim describes a method and system for object system interoperability. An object generator compiles a data model specification such as an XML schema into code that defines at least one DMS object class. However, *Lim* is silent with respect to creating a single class to collectively represent XML schema types that differ in presentation.

Accordingly, claims 1, 10, 13, and 24 also further define over the art of record because the art of record fails to teach or suggest either singly or in combination:

> an act of creating a single class collectively representing both the first XML schema type and the second XML schema type based on the determination of equivalence and not withstanding that the representation of second schema components differ from the representation of the first schema components, the single class compatible with applications utilizing either the first XML schema type or the second XML schema type.

as recited in claims 1, 10, 13, and 24.

In view of the foregoing, Applicant respectfully submits that all the rejections to the independent claims are now moot and that the independent claims are now allowable over the cited art, such that any of the remaining rejections and assertions made, particularly with respect to all of the dependent claims, do not need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice, and particularly with regard to the dependent claims.[2]
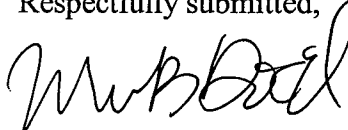
The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17.

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[2] Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting any official notice taken. Furthermore, although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 24th day of April, 2009.

Respectfully submitted,

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